

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

KAREL VAN DEN BERG

SERIAL NO. (to be assigned)

NEW APPLICATION

Filed: (herewith)

Title: AN UNMANNED VEHICLE FOR  
DISPLACING MANURE

PRELIMINARY AMENDMENT

To The Honorable Commissioner of  
Patents and Trademarks  
Washington, D.C. 20231

Sir:

This Preliminary Amendment is for the above-identified Application which is being filed under 35 USC Sec. 111(a) as a Continuation of co-pending International Application No. PCT/NL00/00313 filed May 10, 2000, International Publication No. WO 00/70937 A1, published November 30, 2000. Priority based thereon of May 10, 2000 is claimed and is further claimed for May 25, 1999 based on Dutch Patent Application No. 1012142.

IN THE SPECIFICATION:

A Substitute Specification is submitted herewith. It is requested that the Substitute Specification be substituted for the Specification of International Application No. PCT/NL00/00313, also submitted herewith as the Specification for the instant Application. No new matter has been added to the Substitute Specification. However, the Substitute Specification is amended by the insertion of: RELATED APPLICATION: --This Application is a

Continuation Application of International Application No. PCT/NL00/00313, filed May 10, 2000.-- which is, it is submitted, an appropriate amendment. A marked-up copy of the Specification of the invention is also submitted herewith for comparison purposes.

**IN THE CLAIMS:**

On page 7, immediately following the heading "CLAIMS", please insert: --Having disclosed my invention, what I claim as new and to be secured by Letters Patents of the United States of America is:--.

Please cancel all claims except Claim 1 without prejudice.

Please add the following claims:

Claim 24. An unmanned vehicle for displacing manure which comprises a steering unit for steering the vehicle, a frame, a propelling unit for propelling the vehicle, and a manure displacing means for displacing the manure, said manure displacing means being fitted in the vehicle so that said manure displacing means supports the vehicle while it is operating.

Claim 25. A vehicle in accordance with Claim 24 comprising a first supporting means and second supporting means, said first supporting means and said second supporting means engaging the underlying floor and supporting said frame from the floor, said first supporting means and said second supporting means both being turnable relative to the underlying floor, said first supporting means and said second supporting means being located substantially vertical plane and being coupled to said propelling unit, a

steering unit for steering the vehicle, the total weight of the vehicle being borne by said first supporting means, said second supporting means and said manure displacing means.

Claim 26. A vehicle in accordance with Claim 24 wherein said propelling unit comprises a steering unit which includes at least one rotatable propelling member.

Claim 27. A vehicle in accordance with Claim 24 wherein said propelling unit comprises at least two independently driven propelling members.

Claim 28. A vehicle in accordance with Claim 27, wherein each of said propelling members comprises a wheel.

Claim 29. A vehicle in accordance with Claim 27 wherein each of said propelling members comprises a caterpillar track.

Claim 30. A vehicle in accordance with Claim 24 comprising orientation means for determining the relative position of the vehicle.

Claim 31. A vehicle in accordance with Claim 24 comprising orientation means that controls the vehicle so that it travels along a predetermined course.

Claim 32. A vehicle in accordance with Claim 31 wherein said course is determined by guidance means which comprise apertures in a floor over which the vehicle is travelling.

Claim 33. A vehicle in accordance with Claim 31 wherein said course is determined by guidance means which comprises reinforcement in a concrete floor over which the vehicle travels.

Claim 34. A vehicle in accordance with Claim 31 wherein said

course is determined by guidance means which comprises an electrically conductive wire in which an electrical current is flowing.

Claim 35. A vehicle in accordance with Claim 24, wherein said steering unit comprises orientation means, said orientation means comprising a compass.

Claim 36. A vehicle in accordance with Claim 24 wherein said steering unit comprises orientation means which includes a gyroscope.

Claim 37. A vehicle in accordance with Claim 24 wherein said steering unit comprises orientation means which includes an air level device.

Claim 38. A vehicle in accordance with Claim 24 wherein said steering unit comprises an orientation means which includes a clinometer.

Claim 39. A vehicle in accordance with Claim 24 wherein said steering unit comprises orientation means which includes an accelerator meter.

Claim 40. A vehicle in accordance with Claim 24 wherein said steering unit comprises guidance means, said guidance means comprising following means for detecting and following a wall.

Claim 41. A vehicle in accordance with Claim 24 wherein said steering unit comprises guidance means which includes following means for following the edge of a cubicle.

Claim 42. A vehicle in accordance with Claim 40 wherein the vehicle is in substantial part circular when viewed from above,

said following means being disposed over at least substantially the circumference of the vehicle.

Claim 43. A vehicle in accordance with Claim 40 wherein said following means substantially surrounds and is at least in part supported by said manure displacing means.

Claim 44. A vehicle in accordance with Claim 40 wherein said following means comprises a freely rotating substantially circular element.

Claim 45. A vehicle in accordance with Claim 44 wherein said circular element comprises a wheel.

Claim 46. A vehicle in accordance with Claim 44 wherein said circular element comprises a disc.

Claim 47. A vehicle in accordance with Claim 44 wherein said circular element comprises a sphere.

Claim 48. A vehicle in accordance with Claim 24 comprising protective facilities to protect the vehicle against obstacles.

Claim 49. A vehicle in accordance with Claim 48 wherein said protective facilities comprise a bumper.

Claim 50. A vehicle in accordance with Claim 48 wherein said protective facilities comprise a sensor for detecting cows.

Claim 51. A vehicle in accordance with Claim 48 wherein said protective facilities comprise wall following means.

Claim 52. A vehicle in accordance with Claim 48 wherein said protective facilities comprise positioning means for determining the position of an obstacle relative to the vehicle.

Claim 53. A vehicle in accordance with Claim 52 wherein said

positioning means comprises a clinometer.

Claim 54. A vehicle in accordance with Claim 52 wherein said positioning means comprises an acceleration meter.

Claim 55. A vehicle in accordance with Claim 52 wherein said positioning means includes signal producing means that actuates said steering unit.

Claim 56. A vehicle in accordance with Claim 24 wherein said manure displacing means comprises a brush.

Claim 57. A vehicle in accordance with Claim 24 wherein said manure displacing means comprises a manure slide.

Claim 58. A vehicle in accordance with Claim 24 wherein said manure displacing means comprises a spraying unit.

Claim 59. A vehicle in accordance with Claim 24 comprising anti-bumping means which functions to prevent said manure displacing means from moving too far from the floor by which it is supported.

Claim 60. A vehicle in accordance with Claim 59 wherein said anti-bumping means comprises a bumper.

Claim 61. A vehicle in accordance with Claim 59 wherein said anti-bumping means comprises a bracket.

Claim 62. A vehicle in accordance with Claim 59 wherein said anti-bumping means comprises an anti-bumping sensor for performing the function of detecting movements of said manure displacing means away from the floor which supports the vehicle, coupling means coupling said anti-bumping sensor to said propelling unit.

Claim 63. An unmanned vehicle for displacing manure from an

area which comprises a frame which carries a propelling unit and which is substantially entirely supported by two endless members, the vehicle further comprising manure displacing means, orientation means, steering means and protective means coupled by coupling means to said propelling unit, whereby the vehicle's course of travel within said area is controlled and the vehicle is prevented from colliding with obstacles in said area.

Claim 64. A vehicle in accordance with Claim 63 wherein said endless members comprise wheels and the center of gravity of the vehicle is between said wheels and said manure displacing means.

**IN THE ABSTRACT:**

In lieu of the Abstract which appears under a drawing in the invention on the cover page of the Application submitted herewith, please substitute the **ABSTRACT OF THE DISCLOSURE** appended hereto.

**REMARKS**

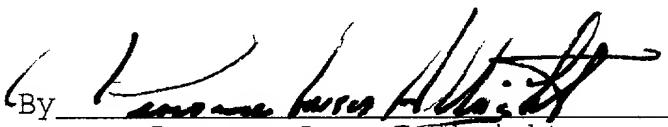
The purpose of this Preliminary Amendment is: (1) To provide a Substitute Specification and an Abstract which are in formats customary for U.S. Patent Applications and which are also expressed in less stilted and more readable idiomatic english; (2) To amend the claims in this Application to eliminate multiple-dependent claims therefrom; (3) To establish a Filing Fee; and (4) To amend the claims so that they are more nearly in formats customary for U.S. Patent Applications. It is to be understood, nevertheless, the claims originally set forth remain part of the original disclosure of the Application.

As amended, the Application has forty-two (42) Claims, three

(3) of which are independent claims. Accordingly, a Filing Fee of \$553.00 appears to be required and our check to cover same is submitted herewith. If this is in error, the Commissioner of Patents and Trademarks is authorized to debit or credit our Account No. 13-2000, as appropriate.

Respectfully submitted,

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